ANALYSIS OF THE IMPACT OF THE SECTION 12 OF CCALA ON THE PHARMACY SERVICES AT LONG TERM CARE FACILITIES MANAGED BY VCH

by

Gancho Armianov
GDBA, Simon Fraser University, 2005
MA, Sofia University, 1998

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APPROVAL

Name: Gancho Armianov

Degree: Master of Business Administration

Title of Project: Analysis of the impact of the Section 12 of CCALA on the pharmacy services at long term care facilities managed by VCH

Supervisory Committee:

Dr. Aidan R. Vining
Senior Supervisor
CNABS Professor of Business & Government Relations
Faculty of Business Administration

Dr. Colleen Collins-Dodd
Second Reader
Associate Professor
Faculty of Business Administration

Date Approved: February 21, 2007
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ABSTRACT

In 2002, the BC government enacted the Community Care and Assisted Living Act. Section 12 of the act brings all assisted living and residential care facilities under one licensing regime. This brings changes to the way the health care providers are reimbursed for pharmaceutical services: from a lump sum per-year to a reimbursement for eligible drug costs, and a fixed sum per occupied bed per-month. This could lead to financial strain for Vancouver Coastal Health (VCH). In this paper, we analyse the potential impact of the new reimbursement policy on pharmacy services at the VCH’s residential facilities. We use the service-customers matrix method and a value chain analysis. The analyses suggest that the financial impact of the enforcement of Section 12 will be minimal for VCH. VCH can continue its current strategy, contract out the service, expand current business, or exit the market.

Keywords: Health policy, Vancouver Coastal health, management
DEDICATION

To my wife
ACKNOWLEDGEMENTS

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DEFINITIONS

Assisted living residences: provide housing, hospitality and personal assistance services for adults who can live independently, but require regular assistance with daily activities, usually because of age, illness or disabilities.

Continuing Care: refers to the system of health service delivery in British Columbia. Continuing Care programs provide a comprehensive range of in-home supportive services, residential care services and special support services to assist eligible persons whose ability to function independently is affected by long-term health related problems.

Dispensing Fee or Professional Fee: the fee charged by the pharmacy for processing the prescription.

Ingredient cost: the cost of the drug ingredient(s) dispensed; PharmaCare pays up to the pharmacy’s actual acquisition cost of the drug (AAC) plus seven percent – any amount charged by the pharmacy greater than seven percent above the AAC is borne by the patient.

Ingredient cost paid, Professional fee paid, or Total paid costs: refer to amounts paid by PharmaCare and do not reflect any amounts paid by beneficiaries.

Licensed community care facilities: A premise, or part of a premise, where care is provided to three or more unrelated persons. For adults, “care” is in the form of three, or more, prescribed services.
Low Cost Alternative: The alternative with the lowest average price (claimed on PharmaNet) of all products usually in the same generic class.

Pharmacy Remittance Advice Form: The statement sent to a pharmacy, dispensing physician/clinic, or non-pharmaceutical supplier when a payment adjustment has been made. For suppliers not connected to PharmaNet the remittance advice details each payment made to them by PharmaCare.

Residential care facilities: provide 24-hour professional nursing care and supervision in a protective, supportive environment for adults who have complex care needs and can no longer be cared for in their own homes.

Respite: Short term, as in a respite resident/bed in a long term care facility.

Rx: prescription

Personal Care Level (P.C.) refers to the highest functional care level classification system in BC. PC clients are those who are independently mobile with or without mechanical aids, require minimal assistance with ADL, and require non-professional supervision and/or assistance.

Intermediate Care Level 1 (I.C.1) refers to the lightest care level in Intermediate Care levels. I.C.1 clients are those who are independently mobile with or without mechanical aids, require moderate assistance with ADL and require daily professional care and/or supervision.

Intermediate Care Level 2 (I.C.2) refers to heavier care and/or supervision requiring additional care time over and above I.C.1 level.

Intermediate Care Level 3 (I.C.3) refers to the psycho-geriatric clients who have severe behavioural problems on a continuing basis. This level of care may also be
used for persons requiring a heavier level of physical care involving considerably more
staff time than at the I.C.2 level but who are not eligible for extended care.

**Extended Care Level (EC)** recognizes the person with a severe chronic disability
which has usually produced a functional deficit which requires 24 hour a day professional
nursing services and continuing medical supervision, but does not require all the
resources of an acute care hospital.

**Complex Care (CC)** refers to the increasing levels of resources needed to meet
the specialized care requirements of specific individuals. Complex care recognizes
individuals whose needs fall within one of five possible groups of care requirements. All
groupings require 24-hour supervision and continuous professional care in a care facility
environment.

Complex Care clients are usually assessed I.C.3 or EC. However, it is important
to note that not all assessed I.C.3 or EC clients will meet the criteria for Complex Care.
Individuals assessed I.C.3 or EC who do not meet the complex care criteria continue to
receive care at home or in a supportive living environment.
1. INTRODUCTION

With more baby boomers entering retirement age, the accessibility and quality of continuous care for elderly people is becoming increasingly important. In 2005, the population of BC was 4.2 million of which 13.9 per cent is over 65. In 2007, PharmaCare costs are expected to exceed $1 billion. The percentage of population over 65 is expected to increase steadily to 17.9 per cent in 2017. Moreover, the median age in British Columbia is expected to reach 42 years by 2015, up from 39.6 years in 2005. Life expectancy is also increasing. In 2005, the median age at death was 79 years and by 2015, it is expected to be 81 years. These demographic changes will lead to increased demand for community care and pharmacy services for seniors. Already we are witnessing this increased demand; in 2005, the amount spent annually on home and community care for seniors was $1.8 billion, nearly $250 million more than five years earlier—a 16 per cent increase.

The federal and provincial governments are striving to cope with the problem by introducing new regulations and programs. In 2002, the Canadian government moved the oversight of the continuous care facilities from the Health Act to a specific law: the Community Care and Assisted Living Act (CCALA). The Act aims to remedy the information asymmetry problem by creating specific standards and a special licensing process.

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3 BC Government, “Conversation on Health.”
4 Information asymmetry is the “differences in the level of information relating to the attributes of an externality between the generator of the externality and the affected party” (David Lea Weimer and Aklan R. Vining, Policy Analysis : Concepts and Practice, 3rd ed. (Upper Saddle River, NJ: Prentice Hall, 1999), 107). In our case, it is the difference in the level of information relating to residential care between the providers and the patients.
regime to ensure the quality of services. Before the CCALA, residential care facilities were regulated under two different acts (the Community Care Facilities Act and the Health Act). Section 12 of the CCALA brings all residential care facilities under one licensing regime. It also changes the way the providers are receive the funding for pharmaceutical services.

Currently, Vancouver Coastal Health (VCH) receives a lump sum per-year to fund the offered services and maintenance of the residential care facilities. It allocates the funds among the various services at its own discretion. Under the new Act, VCH will register under PharmaCare Plan B and will receive reimbursements for eligible drug costs, and a fixed sum (i.e., capitation rate) per occupied bed, per-month. This new method of financing residential care pharmacy services could prove to be very demanding on the resources that VCH will have at its disposal. The major reason for this is that the capitation rate could be less than the marginal cost of providing these services.

In this project, we analyse the potential impact of the new reimbursement policy on the pharmacy operations at the residential facilities managed by the VCH. We also investigate the options VCH has, so that it adapts to the new circumstances in the best possible way. We examine services and clients in detail to clarify to whom services are provided. We also examine the process by which VCH provides services. First, we look at the legal and policy environment in which residential care facilities operate in BC and present a brief overview of the structure and operations of VCH. This is followed by an analysis of the relationship between customers and services. Then we analyse the VCH’s value chain for the long-term care services. Finally, we summarize the options available to VCH.
2. THE REGULATORY SETTING

2.1. The Health Care System in Canada

This section reviews the Federal and BC regulations that provide the legal framework for the issue at hand. Reflecting the constitutional structure of Canada, roles and responsibilities for Canada's health care system are shared between the federal and provincial/territorial governments. Provincial and territorial governments are responsible for the management, organization and delivery of health services for their residents, including residential care. At the federal level, the Canada Health Act (CHA) specifies criteria and conditions that must be satisfied by the provincial and territorial health care insurance plans. Satisfying the specified criteria and conditions makes provinces eligible for the full share of the federal cash contribution that is available under the Canada Health Transfer. Under provincial acts, regulations and programs, the provinces then distribute the available funds and oversee the reimbursement for pharmacy services and care.

In BC, the legislation pertaining to residential care facilities includes:

- the Community Care and Assisted Living Act (CCALA);
- the Adult Care Regulations;
- the Hospital Act;
- the Hospital Act Regulations;

the Hospital Insurance Act;
the Hospital Insurance Act Regulations;
the Continuing Care Act;
the Continuing Care Programs Regulations; and
the Continuing Care Fees Regulations.

We begin by examining the Canada Health Care Act - the core Federal legislation that lays out the general principles that the provinces must follow. Given that a full legislation review is beyond the scope of this paper, only the most relevant provincial legislation are discussed, namely, PharmaCare, the CCALA, and the Community Care and Assisted Living Regulation.

2.1.1. The Canada Health Act

The Canada Health Act (CHA) was passed in 1984, receiving the unanimous consent of the House of Commons and the Senate. The Act replaced the Hospital Insurance and Diagnostic Services Act (1957) and the Medical Care Act (1968), but retained and entrenched the basic principles underlying the national health insurance program that the two acts had introduced. 7

The CHA aims to eliminate direct charges to patients in the form of extra-billing and user charges with respect to insured health care services. These charges are discouraged by the Act as they are subject to mandatory dollar-for-dollar deductions from federal transfer payments to the provinces and territories. 8 The CHA creates a “single-

---

8. Ibid.
health care system\(^7\) that theoretically is more cost-effective than a multi-payer system. In a single-payer setting, procurement is centralized which results in greater bargaining power and to more efficient assets utilization. For example, an X-ray machine could be used by a number of hospitals, rather than each hospital having to acquire one each. This system also results in lower cost of medications.

While providing many benefits, a single payer system can have significant disadvantages. Society is a captive customer and the single payer has no incentives to deliver superior service or value. Universal access also leads to some undesirable outcomes. There can be months, and even years, waiting for a procedure or an appointment with a specialist. The CHA gives the provinces the right to enact legislation and to put in place programs to help alleviate the financial burden for Canadian residents when using medical services and taking medications, to decrease waiting times and improve quality of services.

2.1.2. PharmaCare and PharmaCare Plans

PharmaCare is a program that assists British Columbia residents in paying for eligible prescription drugs and designated medical supplies. The program is funded by the BC government. According to research by the Ministry of Health\(^9\), pharmacy costs have increased one and a half times over the last decade (about 10 per cent per-year since 1993). The pace of increase is projected to accelerate to about 15 per cent per-year until 2009 (see Table 1).

---


Table 1 Projected PharmaCare Cost Increases

<table>
<thead>
<tr>
<th>Amount spent on PharmaCare in 2005/06</th>
<th>Amount spent on PharmaCare in 2008/09 based on current 3-year plan</th>
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<tr>
<td>$867 million</td>
<td>$1.04 billion</td>
</tr>
<tr>
<td>149.1%</td>
<td>Percentage increase of PharmaCare expenses since 1993</td>
</tr>
<tr>
<td>715</td>
<td>Number of different drugs paid for under PharmaCare in 2005</td>
</tr>
</tbody>
</table>

These increased financial pressures have prompted the government to look for ways to improve the efficiency of the usage of available funds by changing coverage policies and plans. The last overhaul was in 2004 when the government introduced a new roster system. The roster is based on a categorization of patients by their financial and medical needs.

The majority of BC residents are covered through the Fair PharmaCare plan. The plan provides assistance in paying for PharmaCare benefits based on a family’s net income. Certain individuals and medical conditions are not covered by the Fair PharmaCare plan. Instead, they are covered by a complementary set of coverage plans:

- **Plan B**: Permanent residents of licensed long-term care facilities.
- **Plan C**: Individuals receiving income assistance through the Ministry of Employment and Income Assistance.
- **Plan D**: Individuals registered with one of four provincial Cystic Fibrosis (CF) Clinics.
- **Plan F**: Children eligible for medical or full benefits through the At Home Program of the Ministry of Children and Family Development.
- **Plan G**: Individuals eligible for benefits through Mental Health Service Centres.


6
• Plan P: Individuals eligible for the BC Palliative Care Drug Plan.

In this analysis, we discuss further only Plan B, as it is the only program relevant to residential care facilities, such as those operated by VCH.

2.1.2.1. Plan B

Through Plan B, PharmaCare provides payments to contracted pharmacies for all eligible drug costs for residents of licensed residential care facilities, as well as a monthly capitation fee. The capitation fee (a set fee per-person, per-month) is intended to cover the total costs of providing pharmacy services, including the additional professional involvement required in clinical settings. According to the latest regulation issued by PharmaCare, the calculation of the capitation rate is based on the actual occupancy of the residential care facility (i.e., the actual number of occupied beds for the month), not on the maximum licensed capacity of the facility. At the end of each month, PharmaCare uses the following steps to calculate the capitation rate:

1. Generates a report of personal health numbers (PHNs) for which PharmaCare has paid a Plan B claim during the previous month.

2. Multiplies the number of PHNs for each facility to which VCH pharmacy provides service by the $35 capitation rate to arrive at the total payment amount.

3. Shows payment information as an adjustment on the Pharmacy Remittance Advice.

---


Short term patients (also known as “respite”, “swing”, or “temporary” patients) in a facility must not be included in calculations for Plan B. Any claim for pharmacy services for respite patients must be made under Fair PharmaCare or Plan C, depending on the patient’s eligibility. Special Service Fees are not paid for long-term care patients.

Automation of the process and payments can generate errors and miscalculated payments. Thus, Plan B payments are monitored and any overpayment in a given month can be recovered. Furthermore, all PharmaCare payments are subject to Ministry of Health Services auditing.14

2.1.2.2. PharmaNet

The effectiveness of PharmaCare depends on the reliability of PharmaNet. This information system helps all parties to exchange information and monitor the distribution of medications and funds. PharmaNet is a secure network that links BC pharmacies to a central database.15 It contains information on patient medication histories, drug information, drug-to-drug interaction information, patient demographic information, historical patient claims information, and PharmaCare adjudication rules. PharmaNet is intended to assist in the preventing of over-consumption of prescription drugs by unintended duplication or fraud, as well as the misuse of medications through multi-doctoring and/or multiple pharmacy use. The service eliminates the need for patients to submit receipts to PharmaCare. It also automates billing and payment processing for all pharmacies. All filled prescriptions in BC are recorded on PharmaNet, no matter whether they are eligible for PharmaCare financial assistance or not. PharmaCare automatically

15 Ibid.
pays pharmacies the PharmaCare portion of eligible prescriptions that are dispensed each week.

2.1.3. The Community Care and Assisted Living Act

The Canada Health Act allows provinces to prioritize their healthcare spending based on their specific fiscal, social and political goals. Given current demographic trends and the increasing importance of care for senior citizens, in 2004, the BC Government enacted the Community Care and Assisted Living Act (CCALA). The purpose of this Act is to regulate residential care services in BC. Prior to the CCALA enactment, some residential care facilities had been regulated under the Canada Health Act and some, under the Community Care Facility Act. The CCALA (specifically, section 12 of the Act) brings all facilities under one licensing regime. Furthermore, the CCALA regulates the licensing procedure for facilities that provide care to elderly people. It also mandates the type and quality of services that must be made available at these facilities.

Most sections of the Act are now in effect. The sections related to the registration of assisted living residences and the regulation of private hospitals and public extended care facilities have still not come into force. The most important is section 12, which will divide the sponsorship responsibility for residential care between the PharmaCare Plan B (for pharmacy services) and a global fund for the remaining services. This change in sponsorship structure could have significant consequences for pharmacy services at those residential care facilities that are managed by VCH. Under the system presently in place, the list of medications used within the VCH network is determined based on their treatment effectiveness and then based on their cost. With the transition to Plan B reimbursement, the order of the criteria when choosing which medications to prescribe...
will be reversed." PharmaCare will reimburse only the equivalent of the cost of a medication that is on its list. Thus, if a particular medication is more expensive, VCH will have either to change it or to cover the price difference in some other way.

2.1.4. Relevant BC Regulations

The Community Care and Assisted Living Regulation lists the services for adult residential care that must be offered by an operator. The prescribed services include\(^{17}\):

- Activities of daily living – services must be delivered in a manner that is consistent with the Personal Assistance guidelines and promote the safety and independence of residents.
- Central storage of medication, distribution of medication, administering medication or monitoring the taking of medication – services must be delivered in a manner that is consistent with the Medication Services Standards of Practice Guidelines and must also promote the safety and independence of residents.
- Maintenance or management of resident cash resources or property – services must be performed in a systematic manner with accounting records and safeguards, and full reporting to the resident, their representative or family.
- Monitoring of food intake or therapeutic diets – services must be performed by a registered dietician in consultation with the resident.
- Structured behavioural program – services must be planned and supervised by a qualified professional.
- Psychosocial rehabilitation or intensive physical rehabilitation – services must be planned and supervised by a qualified professional.

\(^{16}\) Luciana Frighetto. personal communication, October 2, 2006.

The Adult Care Regulation and Child Care Licensing Regulation establish the minimum health and safety standards for licensed community care facilities. These regulations contain definitions, license application requirements, staff requirements, and physical requirements related to health and safety.

2.2. Summary

The Canadian healthcare system follows the federal structure of the country. The Canada Health Act provides the framework for the provinces to formulate care policies and insurance plans. British Columbia has a comprehensive healthcare system with emphasis on improving efficiency and keeping costs low. Care services for senior residents are becoming increasingly important.

CCALA enumerates the services that must be offered at residential care facilities. In addition, it moves the financing of the medication services to the PharmaCare program. This will influence the type of medications that VCH will be able to purchase and the way it receives the funds it needs to operate the pharmacy services. The health authority will be fully reimbursed only for a particular amount determined by the Low Cost Alternative Program. If the cost of the prescribed medication is higher, VCH will have to cover the difference.

In the next chapter, we will overview of the healthcare services organization in the province. This will help us later in our analysis of the residential health industry. It will also help us put in perspective the expenditures VCH has at the residential care facilities.
3. HEALTH CARE SERVICES IN BC

3.1.1. Health Authorities

In December 2001, the BC Government introduced a new structure for health authorities. The previously existing 52 health authorities were merged into 6 new authorities:

- Five regional health authorities: Provincial Health Services Authority, Northern Health Authority, Interior Health Authority, Fraser Health Authority, Vancouver Coastal Health Authority, and Vancouver Island Health Authority. They plan and deliver services to meet the needs of their diverse communities.
- One Provincial Health Services Authority, which coordinates and/or provides provincial programs and specialized services, such as cardiac care and transplants.

The Ministry sets province-wide goals, standards and performance agreements for health service delivery by BC's six health authorities. The regional health authorities receive more than 90 per cent of the Regional Health Sector funding for delivery of health promotion and protection services, primary care, hospital services, home and community care, mental health and addiction services, and end-of-life care. This funding is allocated to five general spending categories: Ambulance Services.

---

PharmaCare, Medical Services Plan, Regional Health Sector Funding and others (see Figure 1 and Figure 2). Here, we examine the expenditures for PharmaCare, as the provincial-wide spending on medications provide a benchmark for the pharmacy services at the residential facilities operated by VCH.

**Figure 1. Expenditures of Ministry of Health for 2003/2004**

Source: PharmaCare Trends 2003
3.1.2. PharmaCare Expenditures

Although relatively small, the PharmaCare share of the budget is increasing. In the 2003–2004 period, PharmaCare expenditures were 7 per cent, or $723 million, out of $10.45 billion (Figure 1). For the period 2005–6, the spending increased to 8 per cent of the total, or $867 million (Figure 2). We can see that only the PharmaCare costs share has increased, while most of the rest of the expenditures have retained their shares. The medical services plan, the major insurance expenditure, lost 1 per cent in favour of the PharmaCare expenses. This change is in line with the strategy of the Ministry of Health to increase non-acute services, which account for the majority of the medical services plan expenses. The treatment of patients outside of hospitals relies mostly on medications, which raises the PharmaCare expenditures.
If the trend of increasing PharmaCare expenditures continues, the share of the funding for residential care services that comes from PharmaCare will increase. The health authorities need to be well prepared for the increased importance the PharmaCare policies will have for their operations.
4. OVERVIEW OF VANCOUVER COASTAL HEALTH

4.1. General Overview

Vancouver Coastal Health is responsible for managing a two billion dollar budget and twenty-four thousand employees working to improve the health of 25 per cent of the population of British Columbia (Table 2).

Table 2 VCH by the numbers

<table>
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<tr>
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<tr>
<td>Annual funding</td>
<td>$2.1 Billion</td>
</tr>
<tr>
<td>Population served</td>
<td>1,003,150 (25% of BC’s population)</td>
</tr>
<tr>
<td>Number of Staff</td>
<td>24,500 staff</td>
</tr>
<tr>
<td>Number of Volunteers</td>
<td>5,000+</td>
</tr>
<tr>
<td>Geographic area</td>
<td>54,165 km²</td>
</tr>
<tr>
<td>Municipalities and Regional Districts</td>
<td>17</td>
</tr>
<tr>
<td>First Nation Communities</td>
<td>15</td>
</tr>
<tr>
<td>Facilities</td>
<td>Providence Health Care, Central Coast communities</td>
</tr>
<tr>
<td>Facilities</td>
<td>476 buildings, 556 locations, 12 million square feet</td>
</tr>
<tr>
<td>Asset value</td>
<td>$1.2 billion</td>
</tr>
<tr>
<td>Hospitals (Acute care facilities)</td>
<td>14</td>
</tr>
<tr>
<td>Diagnostic and treatment centres</td>
<td>2 (Whistler Healthcare Centre, Pemberton Healthcare Centre)</td>
</tr>
<tr>
<td>Number of contracts with other health agencies</td>
<td>300+</td>
</tr>
<tr>
<td>Number of Beds</td>
<td>9,000 acute, rehabilitation and residential beds</td>
</tr>
</tbody>
</table>

VCH serves the residents of a geographic area of 54,165 km². It covers diverse regions: the sparsely populated coastal mountain communities and the densely populated Vancouver, North Vancouver, West Vancouver, and Richmond (Figure 3). The health
authority operates thirteen hospitals and two diagnostic-and-treatment centres. It manages almost nine thousand acute, rehabilitation, and residential beds.

Figure 3. Map of the communities served by VCH

VCH has entered into a “denominational master agreement” for the provision of services with Providence Healthcare. Following this agreement, the facilities managed by the two organizations operate as a single organization. The Providence's CEO is member of the VCH management (Figure 4).
4.2. Residential Care at VCH

VCH owns and operates eight extended care facilities currently designated under Part 1 of the Hospital Act. It provides 1,336 beds. It also manages ten facilities under contract, with 1,251 beds. In addition, VCH and Providence Healthcare jointly manage seven facilities with 723 beds. The total residential beds under VCH management are 3,310, about one third of the total bed capacity. However, there is no specific senior manager responsible for residential care within VCH structure (Figure 4). This suggests
that the residential care services are currently not significant for the strategic planning at VCH.

The aging of the population is likely to make residential care services a more significant part of VCH’s operations. Currently, 12.6 per cent of the population served by Vancouver Coastal Health is over 65 years. By 2014, the percentage of the population over 65 is expected to increase to 14.5 per cent (see Table 3).

Table 3 Senior Population Percentage of Total Population within each B.C. Health Authority for Years 2004 and 2014

| Seniors (65+ years) | Population
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004</td>
</tr>
<tr>
<td><strong>Interior Health Authority</strong></td>
<td>16.90%</td>
</tr>
<tr>
<td><strong>Fraser Health Authority</strong></td>
<td>12.50%</td>
</tr>
<tr>
<td><strong>Vancouver Coastal Health Authority</strong></td>
<td>12.60%</td>
</tr>
<tr>
<td><strong>Vancouver Island Health Authority</strong></td>
<td>16.60%</td>
</tr>
<tr>
<td><strong>Northern Health Authority</strong></td>
<td>9.40%</td>
</tr>
<tr>
<td><strong>All British Columbia</strong></td>
<td>13.70%</td>
</tr>
</tbody>
</table>

It is expected that by 2031 almost one quarter of the population will be over 65 (Figure 5). This means that the absolute number of people over 65 will increase at an even faster rate. The higher share of senior population will create higher demand for assisted living and residential care. As a result, VCH will need to increase its bed capacity.

The pharmacy services provided by VCH include drug procurement, storage, prescription processing, packaging, delivery, and administration. Presently, VCH is in the process of adopting a new distribution system for medication. Providence Healthcare is already using a new packaging system that automatically packages prescribed medication for individual patients in easy-to-use blisters with clear labels. Because the system receives the data about the prescribed drugs directly from the prescriptions, there is little
room for errors. This allows the facilities to use fewer registered nurses and to utilize their time more efficiently.

Figure 5. BC Population Distribution (ages 65+ and 80+)

Currently, a global fund provided by the Ministry of Health is used to finance the pharmacy services. When Section 12 comes into force, the funding structure of the pharmacy services will change and the government will no longer cover 100 per cent of the costs. If the price is not fully covered by PharmaCare, VCH will be able to charge a fee for medications that patients receive.

Presently, pharmacy expenses constitute only about 5 per cent of the current cost structure of VCH (Figure 6). However, if they follow the general trend for the province, their share will increase and with that will increase their importance for the general strategy of VCH.
VCH management has identified two issues that will arise from the impending enforcement of Section 12 and the following change of designation of the residential care facilities from the Hospital Act to the CCALa. The first is the change in funding structure – from a global fund to reimbursement from PharmaCare Plan B. The second is the required change in the information network structure. The current system is not designed to exchange information with PharmaNet. VCH will have either to change the whole system or to add a module that will meet the requirement to connect with PharmaNet (see pp. 37 and 44).

In the next chapters, we examine how the implementation of Section 12 will affect VCH. We start by examining the relationship between the VCH patients and services provided at residential care facilities.
5. RELATIONSHIP BETWEEN SERVICES AND CUSTOMERS

This chapter examines the “customers” at the residential care facilities that are managed by VCH and the services offered at these facilities. We identify the specific service-customers segments\(^1\) that are presently most important for VCH strategy in terms of revenue, margins, and sponsor demand and support. We will compare the pharmacy services segments with the remaining service-customers segments. This provides a better understanding of the role pharmacy services within the framework of residential care.

5.1. Customers Segmentation

In this analysis, we define any person or organization that derives benefits from VCH services as “customers”:\(^2\) There are two primary types of customers – clients and sponsors. Clients are the targets of the primary services. VCH clients are elderly people and patients. Sponsors are those organizations that are engaged in funding VCH, but are not recipients of primary services.

5.1.1. Clients

The residential facilities management use four categories of clients (see Table 4). The classification criteria are mobility, activities of daily living, continence, medical

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\(^2\) Ibid.
condition, mental status, and communication. There are three intermediate levels (I.C.) and one extended care (E.C.) level. The intermediate levels include patients with some degree of independence in their everyday activities. Extended care patients require 24-hour supervision and medical attention, but their condition does not require them to be hospitalized. An analysis of the services’ demands for the different I.C. levels suggests that there is only a small difference between the three levels, that are unimportant for our analysis\textsuperscript{21}. Thus, we group the clients in two general segments: intermediate care and extended care.

5.1.2. Sponsors

Currently, the only sponsor of the residential care services is the Ministry of Health. With the enforcement of Section 12, PharmaCare will become the second sponsor. PharmaCare will sponsor the pharmacy services and the Ministry of Health will finance the remaining services.

\textsuperscript{21} Keith McDonald, personal communication, November 3, 2006
<table>
<thead>
<tr>
<th>MOBILITY &amp; TRANSFER</th>
<th>ADL</th>
<th>CONTINENCE</th>
<th>COMMUNICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERMEDIATE (I.C. 1)</td>
<td>MOBILITY &amp; TRANSFER</td>
<td>ADL</td>
<td>CONTINENCE</td>
</tr>
<tr>
<td>Independence to 10-15 ft.</td>
<td>May need direction or supervision</td>
<td>Daily Living</td>
<td>May need reminders to toileting</td>
</tr>
<tr>
<td>INTERMEDIATE CARE I (I.C. 1)</td>
<td>INTERMEDIATE CARE II (I.C. 2)</td>
<td>INTERMEDIATE CARE III (I.C. 3)</td>
<td>EXTENDED CARE</td>
</tr>
<tr>
<td>Directional Assistance</td>
<td>Supervised Assistance</td>
<td>Supervised Assistance</td>
<td>May require: Daily Nursing/Living Support</td>
</tr>
<tr>
<td>May require: Daily Living</td>
<td>May require: Daily Living</td>
<td>May require: Daily Living</td>
<td>May have: Antisocial behaviours</td>
</tr>
<tr>
<td>May have: Cognitive Impairment</td>
<td>May have: Cognitive Impairment</td>
<td>May have: Cognitive Impairment</td>
<td>May have: Cognitive Impairment</td>
</tr>
<tr>
<td>May have: Memory or Communication Problems</td>
<td>May have: Memory or Communication Problems</td>
<td>May have: Memory or Communication Problems</td>
<td>May have: Memory or Communication Problems</td>
</tr>
<tr>
<td>May have: Vision or Hearing Impairments</td>
<td>May have: Vision or Hearing Impairments</td>
<td>May have: Vision or Hearing Impairments</td>
<td>May have: Vision or Hearing Impairments</td>
</tr>
</tbody>
</table>

Source: Keith McDonald, personal communication, November 10, 2006
5.2. Services Segmentation

The Community Care and Assisted Living Regulation classifies the services offered at the residential care facilities in six categories:

- Regular assistance with activities of daily living:
- Central storage of medication, distribution of medication, administering medication or monitoring the taking of medication;
- Maintenance or management of the cash resources or other property of a resident or person in care;
- Monitoring of food intake or of adherence to therapeutic diets;
- Structured behaviour management and intervention;
- Psychosocial rehabilitation or intensive physical rehabilitation;

VCH uses its own specific categorisation of the services that are offered at its residential facilities. Because the available data about residential care operations data are organised according to this categorisation, we reconcile the services listed in the CCALA Regulation to the categories used by VCH.

“Pharmacy services” are a specific category according to both systems. We group the mobility and eating parts of the “Regular assistance with activities of daily living” and the “Structured behaviour management” services under the category “Allied health services”. The “Rehabilitation services” category includes the remaining of the assisted services and the “Psychosocial rehabilitation or intensive physical rehabilitation”

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24 British Columbia, “Community Care and Assisted Living Regulation: Includes Amendments up to B.C. Reg. 6 2006, January 30, 2006.”
services. The “Food services” includes the Food intake monitoring. Finally, anything, not included in these categories, is included in “Other services”.

5.3. Cost and Budget Structure

Table 5 shows the cost and budget structure for the five service categories. The total cost of providing the service to patients in Extended Care is higher than the total cost for the Intensive Care patients. However, Pharmacy services expenditures are the same for the two categories. Table 5 shows that the budgeted funds for Pharmacy services are lower than the actual costs. This is in line with the comparisons between budgeted and actual costs in the remaining service categories².

Table 5 Current cost and budget structure (CAD/residence day)

<table>
<thead>
<tr>
<th>Services</th>
<th>Clients I.C.</th>
<th>Clients EC</th>
<th>Sponsors Global Fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy</td>
<td>$2.26</td>
<td>$2.26</td>
<td>$1.26</td>
</tr>
<tr>
<td>Allied Health Services</td>
<td>$1.40</td>
<td>$0.83</td>
<td>$1.11</td>
</tr>
<tr>
<td>Rehabilitation Services</td>
<td>$0.78</td>
<td>$0.78</td>
<td>$0.68</td>
</tr>
<tr>
<td>Food Services</td>
<td>$3.78</td>
<td>$3.78</td>
<td>$3.50</td>
</tr>
<tr>
<td>Other Services</td>
<td>$4.46</td>
<td>$6.07</td>
<td>$6.17</td>
</tr>
<tr>
<td>Total</td>
<td>$12.67</td>
<td>$15.71</td>
<td>$12.74</td>
</tr>
</tbody>
</table>

5.3.1. Section 12 Changes

The patients at long-term care facilities do not currently pay directly for pharmacy services that they receive. The cost of the services is covered by the government, which acts as an agent for the patients, through a global fund. When Section 12 comes into force, the relationship between VCH and the sponsors and the patients will change. A new sponsor, PharmaCare, will be introduced. The funding of pharmacy services per-patient/per-residence day will drop to $1.15, which is less than the currently budgeted

² It is beyond the scope of the current analysis to delve into how VCH manages to operate with a deficit.
amount. This is important, as it will change the relationship with the patients. VCH may have to introduce a special pharmacy or a per-diem fee for its patients for the medications whose price is not fully covered by Plan B.

5.4. Organization-level Financing and Revenue Sources

These changes in the finance and revenue sources for the pharmacy services will shift the relationship between the VCH on the one hand, and the government and the patients on the other. Currently, VCH has full discretion regarding how to allocate the global fund (GF) among its services. This allows VCH to prioritise among them and to structure them in an optimal way. Upon Section 12 implementation, the government will determine the pharmacy services funding and VCH will need to tailor its service offering according to the available funds. If extra costs are incurred, VCH will need to find the money to compensate for the difference or the patients will have to bear the cost. The new funding structure will have a significant impact on the freedom of VCH to offer optimal level of services for its different patient categories. The patients (and the society at large) may perceive these surcharges to the patients as either resulting from bad management or from a profit-making strategy.

This shift in financing sources will occur outside the control of VCH or the other health authorities. The level of financing is also outside their control, as it depends on the discretion of the PharmaCare program. These developments show the need for VCH to take into account the uncertainty regarding the level of financing it will receive for providing pharmaceutical services. Any change in the capitation rate may necessitate changes of the level of services the health authority is able to provide.
5.5. Key Attributes Valued by Sponsors

VCH needs to meet the expectations of its sponsors for the level and quality of the services it offers. The current sponsor, the Ministry of Health, is interested in providing the elderly with the best services and quality of life. This means that the sponsor is more interested in effective services delivered at some reasonable price than in making a profit.

Following Section 12 implementation, the pharmacy services will have a new sponsor – PharmaCare. Since the main objective for the program is to keep the costs low, cost efficiency will become the most valued attributes of pharmacy services. PharmaCare expects the health authority to acquire the most cost-effective medications and to administer them at the lowest possible cost. For this reason, PharmaCare has developed a list of drugs that have been approved for reimbursement. This will lead to changes in the list of drugs that VCH purchases (see p.46).

The emphasis on cost efficiency put by the new sponsor PharmaCare can bring uncertainty in the future levels of reimbursement that VCH will be eligible for and in the procedures for its calculation. PharmaCare can change the amount of the capitation rate and/or the reporting procedure at any time. This could be very disruptive to VCH, as the organization will have to readjust its operations “on-the-fly”.

Table 6 Key attributes valued by sponsors

<table>
<thead>
<tr>
<th>Services</th>
<th>Ministry of Health</th>
<th>PharmaCare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy Services</td>
<td>Effectiveness, efficiency</td>
<td>Cost efficiency</td>
</tr>
<tr>
<td>Allied Health Services</td>
<td>Effectiveness, security</td>
<td></td>
</tr>
<tr>
<td>Rehabilitation Services</td>
<td>Effectiveness, efficiency</td>
<td></td>
</tr>
<tr>
<td>Food Services</td>
<td>Effectiveness, efficiency</td>
<td></td>
</tr>
<tr>
<td>Other Services</td>
<td>Effectiveness, quality</td>
<td></td>
</tr>
</tbody>
</table>
5.6. Conclusion

Pharmacy services represent an integral part of the general strategy of VCH. Several differences distinguish them from the rest of the services that VCH offers. After implementing Section 12, the pharmacy services will be sponsored by the PharmaCare program, while the remaining services offered by VCH will remain sponsored by a global fund established by the Ministry of Health. Because for PharmaCare quality of service is measured by efficiency while for the Ministry of Health the quality is measured by efficacy, VCH may need to introduce a different approach to the delivery of pharmacy services at residential care facilities.
6. THE RESIDENTIAL CARE INDUSTRY

The analysis of the residential care industry identifies its attractiveness for VCH. It will also show how the implementation of Section 12 will influence the competitive environment for the residential care services. Since our focus is on the impact of legislative changes on the pharmacy services, we concentrate on the forces pertaining to the delivery of these services within the residential care industry.

We use the five forces framework to analyse the bargaining power relationships between VCH and the other participants in the market. As nonprofit public organizations, the health authorities are heavily regulated by the government. We describe the relationship between health authorities and the government as a “sixth force” that can influence the dynamics pertaining to the other five forces.

We define residential care industry as comprising those organizations that provide to senior residents of BC 24-hour professional nursing care and supervision in a protective, supportive environment.

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Figure 7. Residential care industry analysis
6.1. Forces that Affect the Sector

6.1.1. Threat of Substitutes

There are no viable substitutes for residential care facilities. They provide very specific services that are regulated by specific laws. The law mandates that any service pertaining to residential care and/or assisted living care for two or more seniors must be provided by licensed organizations. This includes the delivery of pharmacy services. Existing regulations prevent the offering of alternative products and services by unlicensed organizations. As a result, there is no significant threat of substitutes.

6.1.2. Suppliers

Due to the patent protection, there is usually one supplier for a particular prescription medication. Sometimes, more than one medication can be used to treat a particular medical condition. In these cases, VCH can bargain about the price. However, if there is only one medication for a particular indication, then the supplier has a significant bargaining power. VCH is aiming at balancing this power by negotiating purchases together with other health authorities. This increases the volume that the buyers are going to purchase and thus gives them a better leverage when negotiating price. In addition, the government also aims to balance the suppliers' bargaining power to some extent by introducing relevant legislations. This is probably one of the reasons for CCALA to put the funding of pharmacy services under the authority of PharmaCare.

6.1.3. Customers

Customers have no significant bargaining power. Their demand for the services and the lack of competition gives them no other choice but to use any opportunity they get to enter the residential care system. A good example for the lack of bargaining power are the cases where family couples get separated as a result of the necessity for an acute care for one of the spouses. Sometimes, after the spouse is discharged from the acute care centre, he or she is transferred to the first available bed and not returned to the same facility where the other spouse resides. In terms of pharmacy services, customer choices are limited to drugs prescribed by their doctors and covered by PharmaCare.

6.1.4. Entry barriers

The licensing requirements, the related requirements to employ specialists, and the requirements towards the infrastructure and assets represent high entry barriers. PharmaCare must license and approve all pharmacies.

6.1.5. Rivalry

There is no rivalry in the industry. Two major factors preclude competition between the providers. First, the health authority system discourages competition between regional providers. Second, the high demand, compared to current capacity, discourages competition between the health authorities and private providers. All competitors operate at capacity and still cannot meet the demand for residential care.

There is no rivalry for pharmacy services, in particular, because the pharmacies are fully owned by the residential care providers. Since the residential care facilities are
responsible for the administration of the medications, they control the source of the medication the patients use and thus prevent them from shopping around.

6.2. The Role of the Government as Regulator

The government is the most important force on the market that VCH needs to consider when creating and executing its residential care strategy. Government is both a client and a funding agency that heavily regulates the market.

As part of the residential care that VCH provides to its patients, pharmacy services are even more susceptible to regulations than are the rest of the offered services. The government not only enacts the laws under which the medication administration is carried out, but also provides specific funding for it. All residential care services are being regulated to ensure consistent quality, efficiency and effectiveness. The implementation of Section 12 will result in an additional regulation of pharmacy services through the PharmaCare program with a much stronger focus on lowering the costs and financial discipline.

6.3. Conclusion

We can describe the industry as highly regulated, with high entry barriers, few (if any) substitutes, captive customers, suppliers with high bargaining power, and little rivalry (Figure 7). Government has the strongest bargaining power. CCAL-A mandates that the residential facilities provide patients with pharmacy services\(^2\), thus essentially determining VCH’s strategy. However, the Ministry of Health sets the price for the drugs, determines which drugs the facilities should provide, and pays the cost of the

administration of the drugs in the form of capitation rate. This pecuniary control determines the strategic positioning of VCH. Because of the enforcement of Section 12, VCH can control only the quality and efficiency of the pharmaceutical services, but not their cost. The residential facilities require a client-focused differentiation strategy for providing pharmacy services.
7. VALUE CHAIN FOR THE RESIDENTIAL CARE SERVICES AREA

In order to understand the impact of Section 12 on the cost and value of the residential care services, we need to analyse the value chain of VCH. Since Section 12 will have the biggest impact on the pharmacy services, we analyse the value chain of the activities that comprise them (Figure 8). As Stabel and Fjeldstad note, effective value chain analysis requires not only obtaining historical data, but also projecting trends and benchmarking with competitors. Given the structure of the accounting data collected by nonprofit organizations, obtaining reliable and accurate cost and value data for value chain analysis is difficult. Thus, we will analyse the strengths and the weaknesses of the activities, and how the new sponsor's requirements will affect them.

Figure 8. Present Value Chain for VCH Residential Care Pharmacy Services
7.1. Supporting Activities

The supporting activities provide the structure and resources that the facilities need to deliver core activities to their clients. As Figure 8 shows, these activities are Infrastructure, HR Management, Technology Development, and Procurement.

While infrastructure and procurement are important, HR Management and Technology development are crucial for the effective performance of these core activities. A closer examination of their contribution to value for the organization is merited here.

Human Resources. Human capital is a major factor for successful and effective provision of the various healthcare services mandated by national and provincial regulations. For pharmacy services, the process of delivering and managing drugs at residential care facilities relies on the knowledge and expertise of licensed personnel. The present packaging and labelling system relies on the experience of the staff that administers medications to patients. Well-trained registered nurses are required to supervise the proper storage and the daily administering of medication to the patients. This makes it imperative that VCH hires and retains the best doctors, registered nurses, and nurses.

Two characteristics make the HR activity an effective component of the VCH’s value chain. The first is its ability to utilize the significant experience and knowledge that its employees possess. VCH can transfer staff between facilities as needs arise, thus optimizing the use of its human resources. The second is the ability to provide appropriate training opportunities for new hires. The current pool of experts and the
ability to provide a hands-on experience in virtually all areas of health care services is an asset for the proper training of the new employees.

**Technology development:** Information systems have an important role for the processing of drug prescriptions. The current IT system in VCH is comprised of three different pharmacy information systems from three different vendors: CareCast (IDX) by Applied Robotics, RxTFC Pharmacy Information System, now Centricity Pharmacy by GE, and STAR by McKesson.

This variety of information systems is both a strength and weakness. The system was incrementally developed following the general IT trends and the evolving needs of the various organizations. As a result, the systems are an integral part of the particular facilities and reflect their particular needs. Thus, they fit very well with the rest of the actions. However, none of these systems has the capabilities to establish a two-way connection to the PharmaNet system. Thus, none can be used for reimbursement claims under Plan B.

### 7.2 Core Activities

According to the CCALR, the pharmacy services consist of the following activities: central storage of medication, distribution of medication, administering medication, or monitoring the taking of medication (Figure 8). They consist of the following activities: Receiving paper prescriptions from doctors in each facility, processing and digitising of prescriptions at the pharmacy, medication packaging, delivery to residential facilities, storage, daily administration to patients, and medication...

12 Luciana Frighetto, personal communication, October 2, 2006
management when patients are discharged or moved to another facility. Currently, these activities are provided in all acute and residential care facilities managed by VCH. This gives VCH the following advantages:

- Through its cooperation with the other health providers, VCH is in a position to purchase the required drugs at preferential prices that reflect the volume of the deal. 34
- HR resources can be utilised by assigning the appropriate employees to the busiest facilities and to the most demanding tasks.
- The residential care and the acute care facilities can share the packaging and distribution technology and capacity. This will bring down the cost of the service. 35

There are no significant weaknesses in the way pharmacy services are currently provided. The most prominent weakness is the lack of full integration of the pharmacy reporting system with the rest of the information systems. This, however, does not disturb any of part the services nor it has any bearing on their quality.

Another weakness is the use of the standard blister packaging system. This is associated with risk of errors, because the nurses could mix up the drugs or the schedule for administering the medications to patients. VCH is currently in the process of transition to new packaging system using the experience of Providence Health. The new system significantly simplifies the medication administration and lowers the error risk. As a result, there will be no need for the supervision of registered nurses and they can be assigned to more pressing tasks. Following the technology changes, the medication administration process will become more streamlined. This may turn out to be a significant strength factor for the value creation by the pharmacy services.

34 Luciana Frighetto, personal communication. October 2, 2006
8. ANALYSIS OF THE IMPACT SECTION 12 WILL HAVE ON CURRENT STRATEGY

The impending enforcement of Section 12 of the CCALA creates a number of pressures on VCH’s management. On the one hand, the Act prescribes that VCH provide medication administration services at its residential care facilities. On the other hand, the requirement to register with Plan B will change the amount of funds available to pharmacy operations at the residential care facilities. This may have a significant financial and social impact on the value chain of VCH.

The financial impact would be reflected on both the income and the expense sides. On the income side, the new policy transfers the decision authority regarding the price of medication administration from VCH to PharmaCare. The new policy also generates expenses for VCH, because investments in software and, possibly, hardware will be needed.

The social impact involves possible layoffs, modification of job descriptions, and changes in compensation of pharmacy staff. The following sections examine the impact of the implementation of Section 12 on particular activities in the value chain for pharmacy services at the residential care facilities (Figure 9).

8.1. Current Strategy

The value creation for VCH is complex. Private-sector care providers can use a simple financial perspective – to increase shareholder value. The nonprofit organisations, however, use more a complex perspective that is reflected in their mission statements.
Thus, the health authority’s mission is to serve its “customers” in the best possible way. These customers are the taxpayers who also supply the funding for the services. Their objectives are to receive the best quality services at the most appropriate prices. This means that instead of productivity and revenue growth, the main measurements used to gauge the VCH’s performance are effectiveness and efficiency (Table 6). VCH’s success is measured by its performance in achieving its mission. Thus, its focus is on best practices and health outcomes.

Residential services are integral part of the general mission and strategy of VCH. The pharmacy services are subordinated to the general strategy of providing the patients with comprehensive quality health care. The residential care facilities cannot function properly without pharmacy services.

Section 12 will change the funding mechanism of the pharmacy services. As we will see, this will lead to uncertainty in the strategic planning for the residential care services. Still, the new packaging machines give VCH good footing for the current strategy. They will reduce costs of both delivery and administration of medications. The lower costs will help VCH to cope better with unexpected adverse changes in the capitation rate policy.

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56 Vancouver Coastal Health, "Our Vision - About Us - Vch." [http://vwrp.vch.ca/about/vision.htm](http://vwrp.vch.ca/about/vision.htm)
58 Ibid.
59 Vancouver Coastal Health, "Our Vision - About Us - Vch."
Figure 9. Expected Value Chain for VCH Residential Care Pharmacy Services
8.2. Supporting Activities

HR requirements: Section 12 will have no direct impact on the human resources. The changes to HR requirements will be a result of changes in the strategy. If VCH continues with managing pharmacy services in house, the changes in the reporting requirements will require changes in workload and job descriptions. One example is the double entry of prescription and patient data. As we already pointed out, this involves an increased workload and an increased risk of errors.

The changes in the funding agency will also change the storage requirements for the over-the-counter medications. Since the patients will have to pay for the medications, the staff will need to keep a separate supply for every patient. This will require the nurses to not only monitor the regular intake of the right medications but also to keep a separate account for each patient’s use of OTC.

The main changes will occur independently of the legislation changes. New packaging machines are improving the medication administration process and are changing the HR requirements. Registered nurses are no longer necessary to supervise the process.

Technology development: The changes in the funding procedures for the pharmacy services will require either new additions to the IT infrastructure or its significant overhaul. The IT system needs to be interfaced with PharmaNet for a two-way data exchange through the implementation of a system that is approved by PharmaCare. This system will need either to retrieve the required information for the claims from the existing medical information systems (see p. 39) or to replace them altogether. However, the IT systems approved by PharmaNet are not designed to be comprehensive patient
information systems. Such systems provide the various VCH departments and employees with up-to-date information about medical history, condition and prescribed medications. The PharmaNet approved systems specialise in accessing and processing only pharmacy information about the patients. Thus, full replacement of the existing systems with one approved by PharmaNet is not feasible.

This makes the interfacing of the IT system with the PharmaNet/Plan B system complicated. Two factors need to be considered – technical complexity and time. On the technical side, the different structure of the information in the three information systems requires the creation of three interfaces and collaboration between the specialists at the PharmaNet-certified vendor and the makers of the current systems. They need to solve together technical problems that are different for each of the systems. Still, the technical problems can be overcome with enough time and resources.

The time factor, however, can be a significant problem. The time for connecting the IT system to PharmaNet will depend on the available human resources that the various vendors can assign to the project. However, the vendors are also involved in other projects, which means that they could have troubles to deploy the necessary resources for this particular project. It is feasible to assume that there could be some delay in commencing the work on any VCH project. Realistically, the work on the interfacing would take between one and a half and three years. Meantime, the prescriptions will have to be entered manually in the PharmaNet system, which puts a strain on the human resources and increases the risk of errors. This would be the most challenging project coming out of the enforcement of Section 12 and will require significant financial, human and time resources.
8.3. Core Activities

**Procurement:** Section 12 will bring significant changes in VCH’s purchasing practices for medications. Currently, VCH purchases the drugs it deems best for a treatment of particular disease. PharmaCare, however, developed a list of pre-approved drugs for which it will reimburse patients. VCH will have either to replace the current choice with the approved one, or to subsidize the price difference.  

The dependence on PharmaCare for reimbursement of cost of medications is a weakness for the procurement activity. PharmaCare’s Low Cost Alternative Program may not cover the full price of some of the currently purchased medications. This could have a twofold effect on the purchasing activities for the residential care facilities. On the one hand, VCH is likely to significantly reduce the orders of such medications, which could lead to increase in their unit prices. It is possible that changes to the list of medications that VCH purchases could lead to costly changes in the purchasing agreements that provide discounts when large volumes of medication are being ordered. On the other hand, doctors prescribe the medications that they deem to be the best for the treatment of the particular health conditions but which may not be on the list of PharmaCare. The doctors would need either to use substitutes or to charge the patients for the extra costs. There is however, a possibility that VCH will be able to acquire listed medications (i.e. approved by PharmaCare) cheaper than the PharmaCare recognized cost. This way, VCH will have some financial flexibility that will allow the limited use  

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40 Luciana Frighetto, personal communication, October 2, 2006  
42 Keith McDonald, personal communication, October 30, 2006
of unlisted medications without financial loss. This will offset the potential weakness in
the dependence on PharmaCare for reimbursement.

**Reimbursement claims:** Reimbursements will be the VCH’s income source from
the pharmacy services. In this respect, processing claims is the most important activity in
the pharmacy services value chain. The PharmaCare uses the reports to PharmaNet to
calculate the costs for the distributed medications and the capitation rate that VCH will
receive for their administration.43 Thus, unless the current information system is
upgraded, the prescription data will need to be entered separately in both the internal
system and the PharmaNet. This double entry represents a significant weakness for the
reimbursement activity. This will put a strain on the pharmacy employees and increases
the opportunities for human errors.44

The Low Cost Alternative Program is also the cause of another weakness. If an
uncovered medication is prescribed, VCH can claim the equivalent of the acquisition cost
of the approved alternative. The difference in the cost will be charged to the patient. This
dual charging process adds to the operational complexity, as special accounting records
need to be kept.

Another, albeit temporary, problem are the already stocked, or ordered,
medications. They will be different from the bill of medications approved by PharmaCare
under the Low Cost Alternative Program. Thus, VCH will have committed to expenses
that is cannot recapture anymore.

43 PharmaCare, "Changes to Payments for Services to Residents of Long-Term Care Facilities."
44 Luciana Frighetto, personal communication, October 2, 2006
8.4. Market Changes

Section 12 will have no significant impact on the forces in the residential care market, because the market is already heavily regulated. The changes will be mostly to the threat of new entrants and the Suppliers’ bargaining power.

The Act puts stringent criteria and requirements for the residential care facilities that want to be licensed. The Act and its regulations prescribe the design and functionality of the facilities, the type and qualification of the employees, the type of services offered, etc. The new entrants on the market will have to fulfill all the requirements in order to be able to get a license. This means that they will have to make higher initial investments and clear significant bureaucratic hurdles. This will increase further the entry barriers.

The PharmaCare list of approved medications will increase somewhat the bargaining power of the suppliers. VCH will not be able to shop around for the alternative with the best deal. On the other hand, the health authority is such a powerful buyer of medications that it could be able to acquire the medications at even smaller cost than the one, covered by PharmaCare. Finally, through Plan B, the government will have even greater bargaining power on the market, as it will be able to change the capitation rate and the calculation method with simple announcements.

8.5. Conclusion

VCH has the right resources to provide the pharmacy services at the residential care facilities. It has good strategic fit and opportunity to leverage the resources in place to provide comprehensive healthcare services. If there are no significant changes in the
market and environment conditions, VCH is in a good position to improve the efficiency of the pharmacy services after Section 12 come into force.

Section 12 will bring changes to some fundamental aspects of the services. The funding agency for the pharmacy services will change from the Ministry of Health to the PharmaCare program. This will change the amount of available funds and the reporting requirements by the sponsor. The resulting transition to Plan B reporting system, together with independent changes in the drug packaging process, pose challenges that significantly change the value of the pharmacy services for VCH.

Unfortunately, some of the information needed for full analysis of the value of the pharmacy services for VCH and for providing a solid recommendation is unavailable. Thus, in the next part we confine ourselves only to listing the alternatives that the health authority has in dealing with the changes in the regulatory environment.
9. ANALYSIS OF THE ALTERNATIVES FOR VCH

VCH will have to adjust to the significant changes in the funding and operations of the pharmacy services following the enforcement of Section 12. VCH has four possible options: to continue their current practice and keep pharmacy services in-house, to contract out the pharmacy services, to expand the reach of its pharmacy services, and to cease provision of pharmacy services. When considering a decision, VCH must clarify the goals it needs to pursue. Then it needs to identify the criteria it is going to use for evaluation of how well the options will facilitate the achievement of the goals. 45

In order to be able to fulfill its mission in the best possible way, VCH needs to consider seven criteria:

1. Cost of medication – the price VCH pays for medications and for their delivery and initial storage.

2. Cost of administration – the cost of prescription processing, packaging, storage, and administering medications. These costs can be tangible and intangible. Direct, tangible costs are increased salaries, prescription processing, storage, opportunism, and bargaining costs. Intangible costs can be related to risk management, opportunity costs and loss of expertise.

3. Income from sponsors – Currently, VCH decides how much from the already available funds it will allocate to the pharmacy services.

45 Aidan Vining and Lindsay Meredith, "Metachoice for Strategic Analysis," European Management Journal 18, no. 6 (2000).
PharmaCare uses the Low Cost Alternative program to determine the amount it will cover irrelevant of the actual cost of the medication.

4. Income from patients – any changes to patients for services rendered or medication provided. Currently VCH is charging nominal amount for OTC medications only. Under the new regulations, VCH will have to charge the full amount of the costs of the OTC medications and the difference, if any, between the amount covered by PharmaCare and the real cost of the prescription medications.

5. Degree of labour intensity – the work load and human resources needed to provide the pharmacy services.

6. Employment – the change in employment requirements.

7. Asset utilization – how good will VCH use and utilize its tangible and intangible assets.

As a non-profit organization, VCH main task is to fulfill its mandate to provide comprehensive healthcare services to the residents of BC. Thus, the goals it needs to consider, when evaluating the options it has are the quality of service and policy compliance.

First, we will examine the effect the different options have on the seven criteria. This will help us to evaluate how each option will enable VCH to fulfill its goals.
9.1. Criteria analysis


9.1.1.1. Income from Sponsors

The funding, which VCH will receive from PharmaCare will be smaller that the funding it currently receives from the Global Fund (see p. 38). However, it is possible that the cost of the pharmacy services will change in line with the funding. As we already pointed out, VCH’s strong purchasing power could actually means that it will be able to negotiate prices for medications that are lower than the amount covered by PharmaCare (see p. 59).

9.1.1.2. Income from Patients

Currently, VCH is not charging patients for the medications they receive. All costs for prescription and over the counter medications are covered by the global fund. PharmaCare, however, is not covering the over-the-counter medications. VCH will have to charge the patients for their use (see p. 48).

VCH will also have more restrictions about the type of prescription medications it will be able to provide to its patients at no additional costs (see p. 46). If the patient needs a medication that is not on the PharmaCare list, VCH will have to charge the patient for the part of the cost that is not covered by PharmaCare.

9.1.1.3. Costs of medication

Current cost structure is determined by the VCH’s ability to negotiate volume purchases for its hospital and residential care facilities together. VCH will still be able to use its buyer’s power to acquire medications at low prices because it will continue to use...
the same purchasing policy. This could allow VCH to get a price for some medications that will be lower that the cost covered by PharmaCare. If there is any favourable difference between the covered price and the actual price, VCH will be able to use this difference to purchase medication that is not covered by PharmaCare. However, if the price of the medicine is higher that the covered amount, VCH will have either to charge the patients for the difference or to cover it in some other way.

9.1.1.4. Costs of administration

Since VCH will have to bill the patients for OTC medication, it will have to keep a record for the patients’ consummation of the various medications. This means that every patient will have his or hers stack of medications. As a result, VCH will have to create special storage and reporting procedures. This is associated with significant cost for additional space and for monitoring the intake of the medications.

Besides the changes in the operations costs, VCH will incur significant one-time investment costs. The reporting requirements for PharmaNet will be a good reason for VCH to align its information systems and make them more compatible with each other. This will facilitate the flow of information between the various units through which a patient can pass.

9.1.1.5. Degree of Labour Intensity

Continuing to provide pharmacy services keeps current employment levels intact. However, the increase in workload at both the administration and the prescription processing activities will increase the workload of the employees. In the same time will increase their responsibilities, because they will be responsible for the correct reporting
of the consumption of the OTC medications. It is feasible to assume that this increase will lead to demands for higher compensations. Given the clout the unions have in the health care industry, this could lead to expensive labour disputes.

9.1.1.6. Assets utilization

The assets that are important for the pharmacy services are the packaging machines, storing facilities, and the status of a high-volume client of the pharmaceutical companies. As already pointed out, if VCH continues to provide the pharmacy services, it will be able to purchase medications at preferable prices, as it will utilize its power as a high-volume purchaser. Further, VCH will better utilize the medication packaging system it currently implements. VCH will have to fulfil more prescriptions and will use better the capacity of the packaging machines.

9.1.1.7. Summary

Overall, it is safe to predict that the costs for delivering pharmacy services will increase. The reasons for this are the rules and policies of PharmaCare. These rules will lead to an increase in the cost of medications that VCH pays, the cost of storing and administering the medications, and increased labour costs. It is hard to measure exactly how big this increase will be, because significant part of it will be attributed to labour and storage activities. Depending on the local space availability and the workload of nurses, the increase will vary between facilities.

The income from the sponsors will decrease, because PharmaCare will not cover the OTC medications. It also has restrictions about the type of medication it will cover and the costs it will recognise and reimburse. In the same time, the income from patients
will increase, as VCH will have to transfer some of the non-covered costs to them. It is not clear, however, whether this will offset the decrease in funding from the sponsors and the increased costs for medications and their administration. VCH already has the assets and the infrastructure it needs in place. Providing the pharmacy services will utilize the capacity of the packaging machines and the buyer’s power it has. If it contracts out the services, VCH will be paying to contractors for assets it already has. Furthermore, the new reporting requirements will prompt the authority to better integrate the information system across its various entities.

9.1.2. Contracting Out the Service

9.1.2.1.Income

If VCH contracts out the pharmacy services, it will forgo any income they could generate. All reimbursements will be directed to the contracted pharmacy. The pharmacy will bill the patients for the OTC medications as well.

9.1.2.2.Costs of medication and administration

With contracting out, VCH aims to minimize the total costs of "receiving" the pharmacy services at its long-term facilities. Costs consist of expenditures for the medication (medication and dispensing costs) and the costs associated with "governing" the contracting out transaction. VCH will save the medication costs but it needs to investigate the potential increases in contract governance costs that could potentially offset the savings.
As Vining and Globerman argue, the presence of information asymmetry most often raises costs of contracting out of services. Information asymmetry is more likely in cases where services include a number of operations with intangible performance criteria. Pharmacy services represent a good example. Control over their quality implies specialized knowledge of performance measurements whose characteristics are only known to the service provider.

Information asymmetry raises the probability that a party to the transaction can act in bad faith. As a result, the health authority could incur opportunism costs, as it would need to reflect the specific itemizing of the costs related to administering the medications at the facilities.

The common approach to the quality measurement issue is to set a minimum/maximum range of the level of provided services. However, given that the capitation rate is fixed, the pharmacies could try to extract maximal profit by providing the minimum level of services to the patients at the residential care facilities. This can be achieved either by skipping some of the monitoring steps or by supplying the medications in a way that could be not in the best interest of the patients. The quality of service will be determined in a contract, however as already mentioned, the control of the contract will be time and resource consuming and VCH will be unable to exercise a day-to-day monitoring.

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17 The costs related to medication administration include, but are not restricted, to salaries, time demand, transportation costs, storage costs, and packaging costs. VCH will have approximate knowledge of their range but it is not possible to guess them without direct observation and analysis of first hand data.

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Opportunism costs can also emerge from the necessity to provide the same service to different categories of clients. While the costs for providing services may vary across client categories, the contractor may try to report only the higher costs. However, VCH's management possesses professional expertise in providing pharmacy services, so it is difficult for the contractors to get away with artificially inflated costs. In addition, the price of the services could be set at a fixed level regardless of cost fluctuations. The fixed price, however, could lead to another potential issue with the contracting out: in their pursuit of higher profits, the contractors could provide lower level of services than presently provided in the public system. On the one hand, the contractors are businesses with the legitimate goal to maximize profits. On the other hand, service quality is more abstract and elusive construct than product quality. The levels of provided services can be monitored by the Medication safety and advisory committee, but the quality cannot be constantly monitored. This significant issue needs to be addressed in any contractual relationship.

The variability of patient turnover rates and patient health conditions across long-term facilities leads to differences in economic profitability of providing pharmacy services. The rate of patient turnover affects the amount of resources per bed. Every new patient is associated with marginal costs and the higher the patient turnover, the higher the marginal costs for the facility. For example, let's say that the cost for setting up a bed

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21 Keith McDonald, personal communication, November 3, 2006.
for one patient is $10. If another patient occupies the same bed during the same month, then the overall cost would be $20, $10 of which is marginal cost. If there were no changes in occupancy of a bed, the marginal cost would be zero. Thus, the more patients go through the facility during a month, the higher the marginal costs. This could lead to “cherry picking” by contractor pharmacies since the provision of the services will be negotiated for each facility separately. As a result, the facilities with higher turnover or with more demanding patients will be left without pharmacy services and the health authorities would have to serve them at a significant cost.

This potential problem can be alleviated by the new PharmaCare policy.\(^\text{52}\) Beginning at the end of 2006, Plan B calculates the capitation rate based on personal health numbers submitted for each month. This means that the facilities will receive payments per patient, not by bed as the policy stated previously. Still, as the policy and/or the amount of the capitation rate can change again, the incentive for private pharmacies to cherry pick remains and VCH could be left with the hard cases that require more resources which could lead to cutting long-term care beds and cancelling important forms of home support. This will ultimately send more people to the (already overstressed) hospitals at a greater cost. According to the Ministry of Health, about 13 per cent of acute care patients in BC hospitals are there because of a lack of long-term, rehabilitation, or community services.\(^\text{53}\)

Besides the opportunism costs, VCH could also incur bargaining costs. Bargaining costs are related to negotiation, renegotiating, performance monitoring, and

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\(^{52}\) PharmaCare, "Changes to Payments for Services to Residents of Long-Term Care Facilities."

contract enforcement. While only negotiation costs are experienced at the time of contracting, all bargaining costs can be anticipated and dealt with at the time of contracting. Significant bargaining costs for VCH could arise if contracts need to be renegotiated due to unexpected changes of the capitation rate or the method of its calculation by PharmaCare. If the new rules reduce the available funds, VCH could have difficulties to fulfil its financial commitments. Even if such a possibility were foreseen in the original contract, the parties would have to renegotiate the service delivery contracts. In other words, the anticipated cost-savings from contracting-out could be offset by opportunity and bargaining costs. They should be included in the cost of administering and supervising contracts, which still must be paid by the public system.

Another, significant, cost comes from the risks associated with the new sponsorship of the pharmacy services. As we already pointed out, PharmaCare can change the amount of the capitation rate and the method for its calculation at any time. Any such change could bring financial difficulties for the provider of the pharmacy services. If contracted out, the contractor will have to deal with these changes while VCH will expect the services to be provided at the same level.

9.1.2.3. Employment and Degree of Labour Intensity

The contracting out would mean significant changes in employment requirements at the residential care facilities. Once the services are provided by different organization, the employees that are currently involved with the medication administration and storage will have to be reassigned to other tasks and positions, or will have to be let go. Both

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options could pose significant challenge for VCH. Reassigning employees will trigger changes in the operations at other services and facilities, which could involve significant costs. Laying nurses and other unionized employees off could bring significant legal and social complications. VCH will have to prove to the unions that the layoffs are necessary and unavoidable and still the unions could cause significant resistance and unrest.

9.1.2.4. Assets utilization

VCH will under-utilize its assets when it contracts out the pharmacy services. The contractor will be responsible for the procurement, packaging and storage of the medications. VCH will pay another organization for the use of assets it already owns and which have the necessary capacity to support the pharmacy services besides their use in providing pharmacy services at the hospitals managed by the authority.

9.1.2.5. Summary

With contracting out the pharmacy services, VCH will be able to save the costs of the medications and their administration. It will transfer the risk from future changes in the policies and procedures of PharmaCare to the contractor. However, VCH will forgo any income from the pharmacy services. This solution also is associated with several types of costs that would easily offset the savings from the medication and administration costs. First, VCH will have to constantly monitor the quality of services. Second, contracting out is associated with opportunity and bargaining costs that can run high.

For these costs, VCH will have to reassign or lay off a number of employees, currently involved in the pharmacy services. In addition, VCH will have to pay the
contractor for the use of assets it already has and currently uses for the pharmacy services at the residential care facilities.

9.1.3. Expanding Pharmacy Services

9.1.3.1. Income from Sponsors and from Patients

If VCH serves the residential care facilities managed by the other health authorities or by private companies, it will receive the reimbursements for those facilities. As a result, the income from sponsors will increase. The same is true for the income from patients. The increased number of patients will increase the total amount VCH will receive from them.

9.1.3.2. Costs of Medication

By serving more facilities, VCH will increase the volumes of medications it purchases which will possibly further lower the costs of prescription medications. The increased usage also will bring down the costs of OTC medications.

9.1.3.3. Costs of Administration

The total costs of administration will increase as will increase the cost of reporting and storing the OTC medications. However, the cost per served patient will decrease, as the increased number of patients will result in economies of scale for the storage and the packaging of the medications.

Expanding the service coverage will mean that VCH will need to connect to the information systems of the organizations for which it will provide the pharmacy services. This could involve significant investments, as the authority would have to interface its system with an additional unknown number of different information systems.
Additional costs that are associated with providing the services for other organizations could involve bargaining costs. The bargaining costs are similar to the one related to contracting out the services.

9.1.3.4 Labour

Expanding the service coverage would demand more human resources. VCH could hire away the employees who currently are involved with pharmacy services at the contracting out facilities. In some areas (such as prescription processing, and medication packaging and storage), VCH could achieve some synergy efficiency. This will depend on the volume of the additional medication administration as it could exceed the current capacity. In such case, VCH will have to expand the prescription processing and medication packaging personnel as well.

9.1.3.5 Assets

The assets utilisation by the VCH’s pharmacy services is probably lower than the potential they could have on a larger scale. As discussed, VCH is in the process of implementing new packaging system for the medication. The new system has a high minimum-efficiency scale and the additional demand from the residential facilities at other health authorities will help bringing the marginal cost down, thus improving the assets’ efficiency.

9.1.3.6 Summary

The income from both sponsors and patients will increase with the increase of the number of residential care facilities that VCH will serve. The average cost of medications

*ibid.*
will go down, as VCH will demand even higher volumes from the pharmaceutical companies and will be able to negotiate better prices.

The increased number of patients will increase the total costs of administration. The staff will have to deal with increased load due to the requirement and storage requirements. The increased number of facilities and patient will require hiring of more employees. At the same time, the increased demand for medications will help VCH better to utilize its assets more efficiently.

9.1.4. Ceasing Provision of Pharmacy Services

This is a purely theoretical option as the health authorities have a mandate from the government to provide pharmacy services at residential care facilities in British Columbia. The only way to exit the market is to contract out the entire residential care services operation to a third party, which is unfeasible.

Given the strong real estate market, VCH could receive significant profit from disposing of the buildings used by the residential care facilities. Furthermore, the authority would lower its payroll expenses, as it will cut its workforce. There could be some other benefits coming from the streamlining of the operations at the services VCH will continue to offer. In addition, leaving the residential care market means that there will be no need for upgrading of the current diverse information network, which will save money and time.

Leaving the residential care market would be in contradiction with the health authority’s mission and current regulations. It would mean that the health authority would not provide comprehensive healthcare services anymore. Besides policy problems, this option will cause significant social tension. Closing the residential care facilities would
entail significant labour relationship problems, as significant number of employees will become redundant. This could lead to significant expenses from labour disputes or compensation packages for the laid off employees. These costs could easily exceed the savings from payroll and benefits.

9.2. Goal analysis


9.2.1.1. Quality Control

By directly providing the pharmacy services, VCH will be able to keep direct control over any aspect that determines their quality: the type of medication the patients receive, the proper schedule for administering, and the proper procedures for packaging, transport, and storage of the medications. Furthermore, they will be able to ensure that the same level of services is provided at all residential care facilities. The patients will be the biggest beneficiaries, as they will continue to receive the same quality services.

The authority will keep full control over the quality and efficiency of the services. The integrated IT system will facilitate the transfer of patients between various entities within the authority. This option will facilitate the fulfillment of the health authority’s mission in the best possible way.

9.2.1.2. Policy compliance

Controlling the pharmacy services will ensure that the health authority fully complies with the CCALA and related regulations. In addition, this will ensure that the pharmacy services are always provided with consideration of the interest of the patients, and not of the profit margin.
9.2.2. Contracting out

9.2.2.1. Quality Control

Besides the costs involved in the outsourcing the pharmacy service, VCH also could face potential conflict of interest that could jeopardize the consistency of the quality of the pharmacy services. This could come from the different profit orientation of the VCH and the contracting partner. While financial efficiency is necessary for the health authority, it is not pursuing profits. As profit-oriented organizations, the potential contractors will pursue profit-maximizing strategies. This means that the contractor could be interested only in maximizing its profits at the expense of the quality of service or the number of patients that receive the service.

9.2.2.2. Policy Compliance

Contracting out to a for-profit organization runs the risk that the contractor is more concerned with profit maximization than with a "(f)ocus on effectiveness, efficiency, best practices, and health outcomes". If the companies pursue the profit maximization at any costs, they could put VCH in a position where they are not in compliance with current regulations. The costs associated with the contracting out stem from the efforts that VCH will have to make to ensure that the services are provided at the proper quality and that it still complies with the CCALA Regulations. The main concern will be to ensure that the contractor provides the same services to all patients.

Vancouver Coastal Health, "Our Vision - About Us - Vch."
9.2.3. Expanding Pharmacy Services

9.2.3.1. Quality and Policy compliance

No policy prevents VCH from providing pharmacy services to other health authorities or private residential facilities. This option will neither improve nor hinder the VCH’s ability to maintain consistent quality of services. Making the decision to offer pharmacy services to other residential care providers is contingent on information about several areas of operation that currently are unavailable to the author of this analysis.

9.2.4. Ceasing Provision of Pharmacy Services

Leaving the residential care market would be in contradiction with the health authority’s mission and current regulations. It would mean that VCH would not provide comprehensive healthcare services anymore. Besides policy problems, this option will cause significant social tension. Closing the residential care facilities would entail significant relationship problems with employees, as significant number of them will become redundant. This could lead to significant expenses from labour disputes or compensation packages for the laid off employees. These costs could easily exceed the savings from payroll and benefits.
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10. CONCLUSION

When it comes into force, Section 12 of the Community Care and Assisted Living Act will bring significant changes in the pharmacy services offered by Vancouver Coastal Health at the residential care facilities. Section 12 ultimately transfers the financial decision making form the health authority to the PharmaCare program. The program differs from the global fund in both the reporting requirements and the funding policy. While now, VCH receives upfront an amount that it has the authority to allocate, as it deems most appropriate, PharmaCare has strict criteria about the costs it reimburses. What is more, PharmaCare can change its policies at any one moment, giving short notice to the affected parties. VCH management will be uncertain about the future level of capitation rate that VCH is going to receive or about the method by which the amounts will be calculated. The new funding system requires a new reporting system that will be used to provide PharmaCare with information needed for calculating the remittance amounts.

These changes require VCH to re-evaluate its current strategy. In particular, it needs to consider its alternatives for future offering of the pharmacy services. When the alternatives are being analysed, several factors need to be contemplated: cost, policy considerations, relationship to the health authority’s mission. The analyses presented here suggest that the service is integral part of the residential care operations and that no longer providing it is unfeasible. The other alternatives are: to keep its current practice of
service provision, to contract out the services, or to expand its offerings by contracting pharmacy services from other health authorities and private providers.

Table 8 shows how the four options score for each criteria based on the information available. As per the project charter, the purpose of this thesis is not to recommend a final solution but rather to examine the options available to VCH for their further consideration.

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11. REFERENCE LIST


